XLII.—On a Collection of Birds made during the Cruise of the 'Valhalla,' R.Y.S., in the West Indies (1903-4). By M. J. NICOLL, M.B.O.U.

(Plate XI.)

LAST autumn the Earl of Crawford kindly invited me to accompany him again as Naturalist during his winter-eruise; and on December 18th, 1903, we sailed from Cowes for Madeira, en route for the West Indies. The only birds seen in the "Bay" were Kittiwakes (Rissa tridactyla). It is curious that out of the numbers of these Gulls observed a very small percentage only were in immature plumage. Last year (1902), in November, I saw numbers of Great Shearwaters (Puffinus gravis) about the Bay; but this year there were none at all. On December 24th we anchored at Funchal, Madeira. We obtained permission from the Governor to collect birds, and the next day we went up into the high fir-woods. I obtained specimens of the following species, all of which I shot at an altitude of above 2000 feet :—

Sylvia conspicillata.	Motacilla melanope.
Erithacus rubecula.	Anthus bertheloti.
Regulus maderensis.	Fringilla maderensis.

The Madeiran Robin resembles our bird in plumage, habits, and song. I cannot see the slightest character by which it could be separated, even as a subspecies, from our English Robin. I shot one example by the roadside, close to the Belmonte Hotel. I saw others at an altitude of 4000 feet and close to Funchal.

At an altitude of 4000 feet I found *Anthus bertheloti* abundant in a clearing. In spite of what has been stated to the contrary, I saw several soaring and singing, like our Meadow- and Tree-Pipits.

Examples of Berthelot's Pipit from Madeira and Tenerife are browner than those from Gran Canaria.

The native Chaffinch is common in the island, especially at an altitude of 2000 feet, near the Hotel. I also saw one in Funchal. I was much struck with its note, which, instead of being a clear "spink-spink" like that of our Chaffinch, is a loud ringing laugh somewhat resembling that of our Green Woodpecker.

On December 27th we left Madeira for Tenerife, and next day anchored at Santa Cruz. The following day we drove out to Orotava. Along the road I saw and obtained specimens of the following six birds :--

Phylloscopus fortunatus.	Serinus canarius.
Sylvia atricapilla.	Anthus bertheloti.
Parus tenerifæ.	Upupa epops.

Phylloscopus fortunatus is very common at Tenerife, and has a somewhat different note from that of our bird. The Canarian Chiffehaff is, in my opinion, a perfectly good species.

On January 1st, 1904, we left Tenerife for Barbadoes, and entered Bridgetown Harbour on January 15th. The island of Barbadoes is entirely cultivated for sugar-cane, and consequently birds are not abundant; but I was much pleased to meet with several of the peculiar species. Close to the town there are a few trees along the shore, and in this place, as well as in a large garden belonging to the Harbour Master, I did all my collecting during our short stay in the island.

I obtained examples of eight species of birds at Barbadoes.

DENDRIECA CAPITALIS LAWR.

Dendræca capitalis Cory, B. W. I. (1889) p. 45.

This beautiful little "Golden Warbler" is by no means uncommon on the island. I obtained five specimens. One immature male has pale reddish markings on the breast, but no chestnut cap.

CERTHIOLA BARBADENSIS Baird.

Certhiola barbadensis Cory, B. W. I. p. 66.

The Barbadoes Honey-creeper is plentiful on the island, but is not always easy to find, as its note (which rather resembles that of our *Locustella nævia*) is somewhat similar to the song of *Euchia bicolor*, which is also a most abundant from the West Indies.

bird. The song is nearly always uttered from the top of a tree, and owing to the thick foliage the birds succeed in hiding themselves very securely.

I obtained seven specimens, two of which are quite immature. A more adult bird has a yellow superciliary stripe, in common with the young. The adult has this stripe pure white. Younger examples have also a more ashy back.

The Honey-creeper feeds on small insects, which it obtains by peeking a hole in the side of the flowers of *Hibiscus* and other plants. It extracts the insects with its barbed extensile tongue.

EUETHIA BICOLOR (Linn.).

Eucheia bicolor Cory, B. W. I. p. 96.

This little Finch is common. Its nest is a domed structure placed in the top of a thick bush. I found several and took seven eggs. Three seems to be the full number in a clutch. I shot two examples of this bird in Barbadoes.

QUISCALUS FORTIROSTRIS Lawr.

Quiscalus fortirostris Cory, B. W. I. p. 110.

This is by far the most abundant bird on the island. Towards evening flocks gather together and repair to the grass in the fields near the town, when they somewhat resemble Starlings in their actions.

This bird has a variety of notes; the one most used is a Woodpecker-like laugh.

As I shall refer to several other species of the genus in the course of this paper, I may as well now describe the curious flight of these birds. The tail is always carried in a peculiar way: it is folded, as it were, down the centre, so that when it is viewed from behind the tips of the rectrices form a V—that is, the central pair are the keel, and the outer pair form the top of the figure. When the bird flies, and wishes to change its course, the tail is (to use a nautical term) "put over" and acts as a rudder. All the members of this genus that I met with had this curious habit, and the birds from Jamaica and Grand Cayman kept their tails in this formation

after the skins were dried. Hence comes the name "Boattailed" Grackle applied to some of them.

ELAINEA MARTINICA (Linn.). Elainea martinica Cory, B. W. I. p. 117. Elainea barbadensis Cory, B. W. I. p. 292.

I obtained a pair of these birds at Barbadoes, but I can see no character by which this species can be separated from *Elainea martinica*. Cory says that it is larger and darker than *E. martinica*; but the largest and darkest that I obtained in any of the islands was in Martinique.

This species is not very common; it seems to be restricted to the gardens near the town.

EULAMPIS HOLOSERICEUS (Linn.).

Eulampis holosericeus Cory, B. W. I. p. 146.

I shot a pair of these Humming-birds at Barbadoes; they were breeding at the time of our visit. They have a habit of sitting on the telegraph- or telephone-wires along the roadside, which makes them look like diminutive Swallows.

I subsequently obtained many examples of this species at other of the West-Indian Islands; and I find that those from Barbadoes, St. Vincent, St. Lucia, St. Thomas, and Nevis have a larger patch of blue on the chest, and have the upper parts greener and not so much bronzed as those from the other islands.

LOXIGILLA BARBADENSIS COry.

Loxigilla barbadensis Cory, B. W. I. p. 290.

This species is peculiar to the island of Barbadoes. Both sexes nearly resemble the female of *L. noctis*. I found a nest, domed, and placed on the fork of a small tree. I shot three examples.

TOTANUS MACULARIUS (Linn.).

Actitis macularia Cory, B. W. I. p. 239.

The Spotted Sandpiper is common in Barbadoes in winter and very tame. I shot two examples on the shore close to Bridgetown; they were in full winter plumage.

This species has a paler bill and yellower legs than our

Common Sandpiper, which it much resembles; there are also a few indistinct black spots on the crissum, even in young birds.

On January 21st we left Barbadoes for Santa Lucia, where we anchored next day.

Santa Lucia is a magnificent island, with high peaks and thickly wooded ; to my mind, it is one of the most beautiful of the West-Indian Islands.

As we paid two visits to St. Lucia (January 22nd to 25th and February 2nd to 5th), I will now give a complete list of the fifteen birds that I met with during the two visits.

We were told that the much-dreaded snake, the "Fer-delance" (*Lachesis lanceolatus*), is now nearly extinct in St. Lucia, having been killed off by the imported mongooses. This is the only good that can possibly be attributed to a most destructive mammal, which will in a very few years completely exterminate several interesting birds, if it has not already done so.

MARGAROPS MONTANUS (Lafr.).

Margarops montanus Cory, B. W. I. p. 29.

I shot two examples of this species in St. Lucia. It is very shy; its flight and movements are decidedly Thrush-like.

Iris pale orange; bill black; tarsi and toes brown.

DENDRECA DELICATA (Ridgw.).

Dendroica adelaidæ delicata Cory, B. W. I. p. 51.

This beautiful little Warbler does not appear to be very abundant. It is very shy, especially if aware that it is being watched or pursued. I had some difficulty in procuring my five examples. Its song much resembles that of a Wren, but is softer. I shot all my specimens in the mangrove-trees which bordered a stream some little way inland. In its actions this species reminded me of a Willow-Warbler, being constantly on the move.

SETOPHAGA RUTICILLA (Linn.). Setophaga ruticilla Cory, B. W. I. p. 60. The North-American "Redstart" is not uncommon at St. Lucia in January and February. I shot three adult males. It is a lively little bird, constantly opening its wings and flicking its tail, when the scarlet bands on the wings are seen to advantage.

CERTHIOLA MARTINICANA Reich.

Certhiola martinicana Cory, B. W. I. p. 66.

This Honey-creeper is to be seen almost everywhere near the town of Castries, and I found it common in the woods further inland. I obtained five examples, several of which had yellow superciliaries. This is a sign of immaturity, as is the case in all the Honey-creepers. Its note and habits resembled those of *C. barbadensis*. I found a pair building a large domed nest in a bunch of leaves on the end of a branch of a mango-tree.

VIREO CALIDRIS (Linn.).

Vireo calidris Cory, B. W. I. p. 76.

This Greenlet was not abundant. I shot two specimens. It keeps to the tall trees in the thick woods, and might easily pass unnoticed were it not for its rich song. The examples obtained had darker crowns than specimens in the British Museum from Florida. This is probably *Vireo* calidris barbadensis of Lawrence.

SALTATOR GUADELOUPENSIS Lafr.

Saltator guadeloupensis Cory, B. W. I. p. 88.

This curious bird was met with only twice at St. Lucia. It has a curious habit of bowing or bobbing up and down when alarmed, whence the name *Saltator* was probably derived. I shot two examples, both males.

LOXIGILLA NOCTIS (Linn.).

Loxigilla noctis Cory, B. W. I. p. 91.

This handsome Finch is common at St. Lucia, but is very shy, keeping as much as possible to the undergrowth. I frequently found it eating the bits of chewed sugar-cane dropped by the natives in the road. I met with this species in several of the other islands, and from St. Lucia and Dominica I got a fair series in all stages of plumage.

Loxigilla noctis sclateri of Allen is, to my mind, not a good

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species, but merely a *really* adult *L. noctis*. The young male in its first plumage has the throat, breast, and abdomen greyish, the back brownish, and the under-tail-coverts chestnut. Later the feathers of the throat become chestnut by *colour-change*; the greyish abdomen becomes black by the same process, as does the rest of the plumage. As the bird becomes older, the red under-tail-coverts are suffused with black, still by the same colour-change, and the throat becomes a deeper chestnut. This continues until the under-tail-coverts are black with only the faintest tinge of chestnut on the tips, and finally become wholly black. Then the bird is in fully adult plumage. I obtained seven males and one female of this species in various plumages.

EUETHIA BICOLOR (Linn.).

Eucheia bicolor Cory, B. W. I. p. 96.

This Finch is common and was, I believe, breeding at the time of our visit.

ICTERUS LAUDABILIS Scl.

Icterus laudabilis Cory, B. W. I. p. 104.

I shot a single adult female of this species, which is peculiar to the island of St. Lucia. I observed two pairs, but they were very shy, and I saw nothing of their habits.

QUISCALUS INFLEXIROSTRIS Swains.

Quiscalus inflexirostris Cory, B. W. I. p. 111.

This species does not seem at all abundant in St. Lucia. I met with it only near the town of Castries, where I shot an adult male. The female is greyer, as are also the young. This bird is exceedingly noisy and inquisitive. Iris pale yellow; bill, tarsi, and toes black.

ELAINEA MARTINICA (Linn.).

Elainea martinica Cory, B. W. I. p. 117.

This Tyrant is common in St. Lucia, as it seems to be in all the West-Indian Islands.

TYRANNUS ROSTRATUS Scl. Tyrannus rostratus Cory, B. W. I. p. 129. This Tyrant was abundant in St. Lucia. It is usually to be seen sitting motionless on a bare branch, now and then flying to the ground to pick up an insect.

EULAMPIS JUGULARIS (Linn.).

Eulampis jugularis Cory, B. W. I. p. 145.

This fine Humming-bird is very abundant in St. Lucia. I shot three examples, and subsequently met with it again in several of the other islands. The flight of this bird resembles that of most of the other members of the group, but I noticed that all the Humming-birds in the West Indies seem more addicted to perching than those that I met with in South America last year. They are all extremely tame.

EULAMPIS HOLOSERICEUS (Linn.).

Eulampis holosericeus Cory, B. W. I. p. 146.

This species is not so common at St. Lucia as E. jugularis. Its habits are similar.

BELLONA EXILIS (Gmel.).

Bellona exilis Cory, B. W. I. p. 152.

I shot several examples of this Humming-bird in St. Lucia. Cory does not mention St. Lucia as within the range of this species, but gives the island as one of the habitats of *Bellona* cristata, a perfectly distinct form. I feel sure that the latter bird does not occur at St. Lucia, and I met with it only in Grenada.

Bellona exilis is abundant and very tame in St. Lucia. One individual several times perched almost within reach of my hand. I fancy that the bird was nesting at the time of our visit, as I seldom saw the female, of which I obtained only one specimen.

On January 25th we left Santa Lucia for St. Vincent, where we anchored the same day. As we spent only one day at St. Vincent and birds were very scarce, I did very little in the way of collecting. The Administrator told us that an American, Mr. Clarke, was then collecting birds on the island. Since I came home I have seen Mr. Clarke's list of birds from this island in the 'West Indian Bulletin.' By his report I observe that he got examples of the St. Vincent Parrot, *Chrysolis guildingi*. Surely it is time to take strong measures to protect this magnificent bird from further destruction. It is now confined to the highest peaks of the island.

In St. Vincent I obtained three specimens only of a single species, *Certhiola atrata*, which is very abundant there. Examples of this bird from St. Vincent have a less yellow tinge on the abdomen and larger bills than those from Grenada, which have been lately separated by Mr. Ridgway as *Correba wellsi* (B. N. A. ii. p. 423), but there are intermediate examples in the British Museum.

We left St. Vincent on January 27th for Carriacou, one of the Grenadines, where we arrived the same evening. Between St. Vincent and Carriacou I saw a Skua (*Stercorarius crepidatus*); this is, I believe, the second recorded from the West Indies. As we did not get to Carriacou till late in the afternoon and left early the next morning, I only had time to visit a small island in the middle of the harbour, on which I had heard that Pelicans (*Pelecanus fuscus*) roosted. Besides the Pelicans, I obtained there specimens of *Zenaida aurita* (Temm.) and *Ægialitis semipalmata* (Bp.).

On January 28th we left Carriacou for Grenada, where we anchored the same day. On our arrival we were told that Sir Frederick Johnston's yacht 'Emerald,' with Dr. Bowdler Sharpe on board, had been at Grenada about three weeks before us. From St. George's, the capital, we drove up to a volcanic lake called "Grand Étang," about 2000 feet above sea-level. In the thick woods round this lake were numbers of birds, but owing to the height of the trees they were difficult to reach. Here I shot an opossum (*Didelphys*). This is the mammal which, having been introduced into Dominica and Guadeloupe, is said to have completely destroyed the now nearly extinct Petrel (*Œstrelata hæsitata*). I collected examples of the following twelve birds in Grenada:—

VIREO LAURÆ. (Plate XI. fig. 2.)

Vireo lauræ Nicoll, Bull. B. O. C. vol. xiv. p. 95 (June 15th, 1904).

This Greenlet, of which I obtained an adult male at Grand

Étang, Grenada, is somewhat similar to Vireo calidris, but is much smaller and of more intense coloration. In plumage it is almost as brightly coloured as V. olivacens. Vireo lauræ also differs from V. calidris in having no buff wash of colour on the face, in which respect it appears to resemble V. calidris barbadensis Ridgway. I have never seen a specimen of this species from Barbadoes; but from Ridgway's description it appears to be almost intermediate between Vireo calidris and V. lauræ as regards the coloration of the head. I have seen specimens of Vireo calidris from Grenada, and have shot others in St. Lucia.

My type of *V. lauræ* differs from *V. calidris* in being much smaller, having a much more slender bill, and being altogether more washed with green. It has also yellower under-wing-coverts and crissum, and a very much darker crown, which is almost slaty-blue. *Virco lauræ* has the second and fourth primaries equal, and the first much shorter than the fifth.

Dr. Sharpe obtained two examples of this new species at Grenada, and I have examined five or six specimens in the British Museum from the same island. I have therefore not the slightest hesitation in separating it as distinct.

This Vireo is fairly abundant in the high wood at Grand Étang. Its song, which somewhat resembles that of the Blackeap (Sylvia atricapilla), is constantly heard, but the bird seems to keep out of sight in the foliage. I was told that this species is resident at Grenada. I have named it in honour of Laura, Countess of Wilton.

TURDUS NIGRIROSTRIS Lawr.

Merula nigrirostris Cory, Cat. B. W. I. p. 122 (1892).

Turdus nigrirostris, Seebohm, Cat. B. v. p. 218; Seeb. & Sharpe, Mon. Turd. i. p. 253.

I shot three examples of this fine Thrush at Grand Étang, one male and two females. They appeared in small flocks at the outskirts of the forest towards evening. A native told me that he did not know the species; the only "*Grive*" which he had seen was one with a bare patch round the eye. This would probably be *Turdus gymaophthalmus*. Cory does not give Grenada as a locality for this species in his 'Birds of the West Indies,' but adds it in his Catalogue of 1892. It was first described from a specimen shot in St. Vincent. There are no examples of this species in the British Museum except those which I have obtained.

MIMUS GILVUS (Vieill.).

Mimus gilvus Cory, B. W. I. p. 34.

The Mocking-bird is common at Grenada, especially in the Botanical Gardens in the town (St. George's). Its song resembles that of our Blackbird, and, like that species, it usually sings from the top of a tree.

TYRANNUS ROSTRATUS Scl.

Tyrannus rostratus Cory, B. W. I. p. 129.

This Tyrant was numerous at Grand Étang.

GLAUCIS HIRSUTA (Gmel.).

Glaucis hirsuta Cory, B. W. I. p. 142.

One female. Iris pale red; bill black above, yellowish below; tarsi and toes orange.

This species was only observed at Grand Étang, where I shot a single specimen. I noticed several flying round a house there, and taking insects from the cracks in the wooden walls. In the thick woods I saw others feeding round the trunks of trees, but I did not observe any of them feeding at the flowers. They make a very loud humming with their wings, which can be heard at some little distance.

Coccyzus minor (Gmel.).

Coccyzus minor Cory, B. W. I. p. 160.

I think that examples of this species from the southern islands of the Lesser Antilles are larger and darker than those from further north. I have been carefully through the large series in the British Museum, and find that my example is hardly to be distinguished from *Coccyzus dominica* (Shelley, Cat. xix. p. 306), as is also the case with an example in the British Museum from Montserrat. Specimens from St. Vincent are apparently intermediate between *C. minor* and *C. maynardi*.

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EUETHIA BICOLOR (Linn.). Euetheia bicolor Cory, B. W. I. p. 96. This Finch is abundant and resident in Grenada.

Bellona Cristata (Linn.).

Bellona cristata Cory, B. W. I. p. 151.

This beautiful little Humming-bird is to be found in abundance everywhere, from the town of St. George to the Graud Étang at an elevation of 2000 feet. I collected five specimens.

COLUMBA SQUAMOSA.

Columba squamosa Salvad. Cat. xxi. p. 280. Columba corensis Cory, B. W. I. p. 210.

This fine Pigeon is abundant in the high woods of Grenada. I obtained three examples at Grand Étang. They feed on the large date-shaped seeds of a palm. They are exceedingly wary. I was told that during the eruption of the Soufrière at St. Vincent enormous flocks of these Pigeons arrived at Grenada and stopped for some weeks, and then disappeared. The note of this species is a harsh "coo."

CALLISTE CUCULLATA (Swains.).

Calliste cucullata Cory, B. W. I. p. 289.

I found this Tanager very abundant at Grand Étang, where it seems to resort to the woods. Its native name there is the "Blue-bird."

ELAINEA PAGANA (Licht.).

Elainea pagana Cory, B. W. I. p. 292.

This species is, I believe, fairly abundant in Grenada, but I did not see many examples. I shot one only; it differs from *Elainea martinica* in having more yellow on the abdomen, yellower under wing-coverts, and a darker mantle and crown.

Myiarchus tyrannulus.

Myiarchus tyrannulus Scl. Cat. xiv. p. 251.

Cory does not mention this species in his 'Birds of the West Indies,' but gives M. oberi as occurring in Grenada. The latter species may be found there, but M. tyranulus is

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entirely different, having the under wing-coverts and abdomen much more yellow than in *Myiarchus oberi*. The example obtained was the only one seen.

We left Grenada on February 1st for St. Vincent, where we anchored for the night. Early next morning we sailed for Santa Lucia again. The birds collected during this visit I have united with those obtained at the time of our first visit.

On February 5th we left Santa Lucia for Martinique, where we spent the next day. I obtained permission to collect, but found birds very scarce. Nearly all the island has been cleared and cultivated. I only obtained examples of the following three species :—

EUETHIA BICOLOR (Linn.).

Eucheia bicolor Cory, B. W. I. p. 96.

This is the commonest bird in Martinique; I shot two examples. Individuals vary considerably in the amount of black on the breast, but I think that this is chiefly due to age. I noticed the same fact with this species in the other islands.

QUISCALUS INFLEXIROSTRIS Swains.

Quiscalus inflexirostris Cory, B. W. I. p. 111.

I saw a few of these birds amongst some cattle in a field, and obtained a female in grey plumage. I also saw several black males.

ELAINEA MARTINICA (Linn.).

Elainea martinica Cory, B. W. I. p. 117.

The single example obtained (a male) is a remarkably dark bird—the darkest obtained in any of the islands.

On February 7th we left Port de France, Martinique, to visit the ruins of St. Pierre, which was destroyed during the great eruption. They are a most dismal sight, every house being utterly wrecked. One wall of the cathedral is standing, and I saw a *Quiscalus* perched on it. The vegetation is beginning to grow again, and I noticed a small bananatree. Tropic-birds (*Phaëthon*) were flying high overhead, and I observed a small flock of Finches (*Eucthia bicolor*) amongst the ruins.

After spending a couple of hours on shore at St. Pierre, we left Martinique, and the same afternoon (Feb. 7th) anchored in Roseau Harbour, Dominica. Next morning, after having obtained permission from the Administrator, I went out shooting, and obtained on this and the next day examples of the following seventeen species :—

THRYOTHORUS RUFESCENS Lawr.

Thryothorus rufescens Cory, B. W. I. p. 38.

The two shot were the only examples of this species seen. The first was by the roadside, creeping about a bank; the other was found amongst some stones in the lime-groves. I heard no note uttered by either of these birds.

DENDRŒCA RUFICAPILLA (Gmel.).

Dendroica petechia melanoptera Cory, B. W. I. p. 45.

Mr. Ridgway, in his 'Birds of Middle and N. America' (vol. ii. p. 523), has revised the group of Golden Warblers, and has assigned the specific name *raficapilla*, instead of *melanoptera*, to this species. I have followed his lead throughout (except as regards trinomials), as I have not nearly large enough series of the different species to arrive at any definite conclusions. So far as my experience goes, I find that specimens from different islands often grade into one another, and I venture to say that there have been too many species or subspecies made in this very difficult group.

The present species is fairly numerous amongst the limebushes. Its song is pleasant and wren-like. I obtained three specimens.

DENDRŒCA PLUMBEA Lawr.

Dendroica plumbea Cory, B. W. I. p. 54.

I shot a single example of this species by the roadside not far from the Botanical Gardens. It was the only one that I saw. I do not think that it is abundant, at any rate near the coast. SETOPHAGA RUTICILLA (Linn.).

Setophaga ruticilla Cory, B. W. I. p. 60.

I shot one example of this species, an adult female. I saw several others in a lime-grove.

CERTHIOLA DOMINICANA Taylor. Certhiola dominicana Cory, B. W. I. p. 65.

The Dominican Honey-creeper is very abundant, especially among the lime-groves. I shot eight specimens. I cannot quite understand Cory's statement in his description of this species, that the superciliary stripe is lacking or extremely indistinct in front of the eye. All my specimens had the eye-stripe very plainly marked from the whitish forchead nearly to the nape.

VIREO CALIDRIS (Linn.).

Vireo calidris Cory, B. W. I. p. 76.

Vireosylvia calidris, var. dominicana Lawr., Pr. U.S. Nat. Mus. i. p. 55 (1878).

The two female specimens obtained have the crown coloured as in those from St. Lucia, but differ slightly from them in having buff superciliary stripes and a buffy wash about the face. They were both shot in a grove of limetrees.

SALTATOR GUADELOUPENSIS Lafr.

Saltator guadeloupensis Cory, B. W. I. p. 88.

This bird was not uncommon in the river-valley. I shot a pair in some lime-bushes.

LOXIGILLA NOCTIS (Linn.).

Loxigilla noctis Cory, B. W. I. p. 91.

This is an abundant species at Dominica; it had apparently finished breeding, and I was able to get a fine series of young birds in several stages of plumage.

EUETHIA BICOLOR (Linn.). Euetheia bicolor Cory, B. W. I. p. 96. This bird is numerous in Dominica. Mylarchus oberi Lawr.

Myiarchus oberi Cory, B. W. I. p. 126.

This species was not uncommon up the river-valley behind the town, about three miles inland. I obtained two examples.

Myiarchus oberi may be distinguished from M. tyrannulus by the very much paler yellow of the under wing-coverts and abdomen.

TYRANNUS ROSTRATUS Scl.

Tyrannus rostratus Cory, B. W. I. p. 129.

This Tyrant is fairly numerous in Dominica. I shot a single example, a male.

EULAMPIS JUGULARIS (Linn.).

Eulampis jugularis Cory, B. W. I. p. 145.

This beautiful Humming-bird is very common in Dominica. I noticed a huge tree in flower, which had numbers of Humming-birds of the present species as well as of *Eulampis* holosericcus and *Bellona exilis* feeding in company.

EULAMPIS HOLOSERICEUS (Linn.).

Eulampis holosericeus Cory, B. W. I. p. 146.

This Humming-bird is not so numerous in Dominica as *E. jugularis*, at least I did not find it so. I shot two examples.

BELLONA EXILIS (Gmel.).

Bellona exilis Cory, B. W. I. p. 152.

This bird is very numerous and exceedingly tame. I obtained three specimens.

CHAMÆPELIA PASSERINA (Linn.).

Columbigallina passerina Cory, B. W. I. p. 217.

This Ground-Dove is very numerous in the lime-groves. I shot two females. Cory (Birds of the West Indies, p. 217) says that the sexes are similar, but the females which I shot in the West Indies have no trace of the reddish-purple tinge which is so conspicuous in the male. They also differ considerably from the male in the markings of the throat and fore-neck. TOTANUS MACULARIUS (Linn.).

Actitis macularia Cory, B. W. I. p. 239.

The Spotted Sandpiper is abundant in Dominica in the winter. I shot a pair of these birds.

BUTORIDES VIRESCENS (Linn.). Ardea virescens Cory, B. W. I. p. 247.

This handsome little Heron is very common in Dominica. Its cry of alarm is a loud "squawk." I shot two females in some swampy ground by a small river. The dorsal plumes of these two examples are greenish, faintly tipped with "lilae."

On February 10th we left Dominica for Montserrat, which was reached nine hours later. We made a stay of only one day there, so I was not able to get very far from the town, but I obtained examples of the following ten species of birds along the shore at Montserrat, mostly in the thornbushes :—

PARULA AMERICANA (Linn.).

Compsothlypis americana Cory, B. W. I. p. 40.

Fairly numerous in the thick bushes along the shore. I shot two examples.

DENDRŒCA RUFICAPILLA (Gmel.). Dendroica petechia melanoptera Cory, B. W. I. p. 45. I shot three examples of this bird at Montserrat.

DENDRŒCA DOMINICA (Linn.). Dendroica dominica Cory, B. W. I. p. 50.

I shot a single example of this species in some thornbushes along the shore at Montserrat. This is, I believe, the first record of this bird for the Lesser Antilles.

SETOPHAGA RUTICILLA (Linn.). Setophaga ruticilla Cory, B. W. I. p. 60.

I saw several examples of this migrant from N. America. I shot one adult female. CERTHIOLA DOMINICANA Taylor.

Certhiola dominicana Cory, B. W. I. p. 65.

This species is numerous at Montserrat : there seems to be no difference between specimens from Montserrat and Dominica.

EUETHIA BICOLOR (Linn.).

Eucheia bicolor Cory, B. W. I. p. 96.

A very abundant species in Montserrat. I shot a pair on the shore.

ELAINEA MARTINICA (Linn.).

Elainea martinica Cory, B. W. I. p. 117.

I saw several examples of this species at Montserrat, and obtained one specimen.

CERVLE ALCYON (Linn.).

Ceryle alcyon Cory, B. W. I. p. 163.

I shot a single female specimen of this North-American Kingfisher on the shore at Montserrat.

FALCO CARIBBÆARUM Gmel.

Falco caribbæarum Cory, B. W. I. p. 204.

I shot three examples of this handsome little Kestrel, one of which was a fine adult male. It was fairly numerous in pairs along the shore.

Cory's description of *F. caribbearum* is very misleading; he makes no mention of the bluish-slate-coloured upper wingcoverts, and has probably taken his characters from a young specimen or an adult female.

CHAMÆPELIA PASSERINA (Linn.).

Columbigallina passerina Cory, B. W. I. p. 217.

This Ground-Dove is very abundant at Montserrat; I found it in little flocks of six or eight, and shot four specimens.

This species varies considerably in plumage and also in the coloration of the bill; these characters, however, are not constant in any one island, and I have placed all the specimens obtained in the West Indies and Florida under the same name. We left Montserrat on February 12th, and arrived at St. Kitts the same day.

The Island of St. Christopher (commonly called St. Kitts) has been almost entirely cleared for the cultivation of sugarcane, and this, coupled with the introduction of the mongoose, has done much to make birds scarce. However, by going three or four miles in the launch and landing on a nearly uninhabited portion of the island, I was able to get some specimens. Pelicans (*Pelecanus fuscus*) were abundant; I saw also a few Terns (*Sterna maxima*) and an Osprey (*Pandion carolinensis*).

I collected examples of the following seven birds at St. Kitts :---

DENDRECA BARTHOLEMICA (Sund.).

Dendræca petechia bartholemica Ridgw. B. N. A. ii. p. 518. This Warbler is very common amongst the thick bushes on the shore at St. Kitts. I observed that most of those which we shot had a curious disease of the legs and feet, these parts being much enlarged and very rough and scaly.

PARULA AMERICANA (Linn.).

Compsothlypis americana Cory, B. W. I. p. 40.

This migrant from North America was very numerous at St. Kitts during our visit in February. Most of the examples seen were young birds.

CERTHIOLA DOMINICANA Taylor.

Certhiola dominicana Cory, B. W. I. p. 65.

I saw very few Honey-creepers at St. Kitts, and obtained one specimen only.

EUETHIA BICOLOR (Linn.).

Eucheia bicolor Cory, B. W. I. p. 96.

This was the commonest bird seen at St. Kitts.

EULAMPIS HOLOSERICEUS (Linn.).

Eulampis holosericeus Cory, B. W. I. p. 146.

I saw very few Humming-birds at St. Kitts, and obtained only one, an example of this species. This specimen has much less blue on the chest and a more bronzed back than those from Barbadoes, St. Lucia, and St. Vincent. TRINGA MINUTILLA (Vieill.).

Tringa minutilla Cory, B. W. I. p. 234.

I shot a single example of the American Little Stint by a large pool, not far from the shore. Its note, which resembles the words "wick-wick," is uttered on the wing.

PELECANUS FUSCUS Linn.

Pelecanus fuscus Cory, B. W. I. p. 271.

The Brown Pelican is very numerous at St. Kitts. One which I shot was in quite immature plumage, the other was getting the hoary feathers of the adult bird on the mantle and wing-coverts.

On February 15th we left St. Kitts for Antigua, which we reached on the afternoon of the same day. We were not able to enter the harbour, owing to the shallow water over the "bar," and as we had to lie two miles off the landing-place, and only spent a day there, I was unable to do any collecting. I met a Mr. Selwyn Branch there, however, who was collecting birds. He had made several collections from different islands for the Tring Museum, and he kindly presented a small collection of the following birds to us :—

Margarops densirostris (Vieill.).	Dendrœca discolor (Vieill.).
Muiotilta varia (Linn.).	Certhiola dominicana (Taylor).
Dendrœca striata (Linn.).	Euphonia flavifrons (Sparrm.).
Dendrœca bartholemica (Sund.).	Elainea martinica (Linn.).

Mr. Selwyn Branch told me that he had collected birds in Guadeloupe and Dominica, and that an old negro who had been a slave had shown him on the mountains in Guadeloupe the now long-deserted burrows of *Œstrelata* hæsitata, and had told him that he remembered the time when he had taken twenty young in a day by drawing them out of the burrows with an iron hook; he used to eat them. This native further said that they are now never seen there. It is possible that they may still be found in the mountains of Haiti, when that country is in a fit state to be properly explored. After leaving Antigua and calling again for a few hours at St. Kitts, we reached St. Croix on February 19th.

I found birds comparatively scarce at St. Croix (with the exception of *Chamæpelia passerina*), but managed to secure skins of the following eight species :---

MNIOTILTA VARIA (Linn.).

Mniotilta varia Cory, B. W. I. p. 40.

Common in winter at St. Croix. I shot a pair of adult birds.

In its actions this species reminds one of our Creeper (*Certhia*), although it does not climb so much on the tree-trunks as our bird.

PARULA AMERICANA (Linn.).

Compsothlypis americana Cory, B. W. I. p. 40.

This bird was very common at St. Croix. A specimen obtained was an adult male: this was the only adult male of this species that I shot in the West Indies.

DENDRECA BARTHOLEMICA (Sund.).

Dendræca petechia bartholemica Ridgway, Birds N. & Middle America, p. 518.

This was the only example of this species that I saw at St. Croix. It appears to be identical with the birds from St. Kitts.

DENDRECA DISCOLOR (Vieill.).

Dendroica discolor Cory, B. W. I. p. 53.

This species is an abundant winter-visitor to St. Croix, and is usually found in the thick undergrowth.

CERTHIOLA NEWTONI Baird.

Certhiola newtoni Cory, B. W. I. p. 65.

This bird is not uncommon, but is difficult to find as it keeps to the thick bush.

TYRANNUS ROSTRATUS Scl. *Tyrannus rostratus* Cory, B. W. I. p. 129. This is one of the commonest birds in St. Croix. EULAMPIS HOLOSERICEUS (Linn.). Eulampis holosericeus Cory, B. W. I. p. 146. This was the only species of Humming-bird met with at St. Croix. It was common there.

CHAMÆPELIA PASSERINA (Linn.). Columbigallina passerina Cory, B. W. I. p. 217. This appeared to be the most abundant bird in St. Croix.

On February 21st we left St. Croix for St. Thomas, where we anchored after a few hours' voyage.

I made enquiries of several residents concerning the St. Thomas Parroquet (*Conurus xantholæmus*). Some told me that it was extinct, but one man, a doctor, informed me that he had occasionally seen a few at the eastern end of the island. However, during our short visit I did not meet with it. That it is still to be found there, however, is certain, as Dr. Lowe, of the S.Y. 'Emerald,' shot one from a small flock at the cast end of the island a few weeks before our visit. I have had the pleasure of examining this specimen in Dr. Lowe's collection.

I obtained examples of the following species of birds in St. Thomas :---

Parula americana (*Linn.*). Mniotilta varia (*Linn.*). Dendræca bartholemica (*Sund.*). Dendræca discolor (*Vieill.*). Setophaga ruticilla (*Linn.*). Certhiola portoricensis (*Bryant*). Euethia bicolor (*Linn.*). Eulampis holosericeus (*Linn.*). Coccyzus minor (*Gmel.*). Chamæpelia passerina (*Linn.*).

We left St. Thomas on February 24th for Porto Rico, where we spent a day at Port Juan, but I had no opportunity of collecting.

On February 26th we left Porto Rico for Jamaica. On the 27th, while passing San Domingo, an example of *Vireo* calidris flew on board, and I shot it with an air-gun. It proved to be a typical *V. calidris* with a strong buff wash over the head; the crown was scarcely grey and much washed with buff.

On February 29th we anchored at Kingston, Jamaica. I was somewhat surprised to find that the island had a decidedly parched appearance, and was not nearly so thickly wooded as are most of the other West-Indian Islands. Black Vultures (*Cathartes atratus*) are abundant in the town.

I visited the Museum belonging to the Agricultural Society, where there is a fair collection of native birds, but they are badly stuffed.

I spent two days in Jamaica, in the woods and mangroveswamps near Kingston, but did not find birds at all abundant. I obtained examples of the following eighteen species :—

Mimus orpheus (Linn.).	Pitangus caudifasciatus (D'Orb.).
Mniotilta varia (Linn.).	Myiarchus stolidus (Gosse).
Dendrœca petechia (Linn.).	Mellisuga minima (Linn.).
Dendrœca discolor (Vieill.).	Todus viridis Linn.
Siurus noveboracensis (Gmel.).	Tringa minutilla Vieill.
Setophaga ruticilla (Linn.).	Totanus macularius (Linn.).
Certhiola flaveola (Linn.).	Florida cærulea (Linn.).
Vireo modestus Scl.	Hydranassa ruficollis (Gosse).
Quiscalus crassirostris Swains.	Rallus caribæus (Ridgw.).

I append short notes on two of these species :---

MELLISUGA MINIMA.—I was much surprised at the extraordinarily loud voice of this tiny Humming-bird. When I first heard it I mistook it for the ery of a Honey-creeper, and I was much astonished when I discovered that it was this minute bird that was giving forth these loud notes while sitting on the top of a sapling.

TODUS VIRIDIS.—I obtained only two females of this bird, but probably overlooked others, as it sits motionless on a branch, and owing to its green back is difficult to distinguish from the leaves.

We left Jamaica on March 8th for Grand Cayman. The Caymans, which form part of the Colony of Jamaica, consist of three islands—Grand Cayman, Little Cayman, and Cayman Brac. They lie south of Cuba and 200 miles north-west of Jamaica. They were discovered by Columbus on his return voyage from Porto Bello to Hispaniola (now Hayti), and were named by him "Las Tortugas" on account of the turtles with which the coast then swarmed. The present name is supposed to be derived from "Caiman"—the alligator, which the largest island somewhat resembles in shape when approached from the east.

Grand Cayman is about seven miles from east to west: it is about four miles in breadth at the east end and seven miles at the west. The highest point on the island is only 150 feet above the sea. As regards the flora of these islands, there is a peculiar orchid here which is very abundant. The trees are mahogany, cedars, mangroves which grow to a very fair height, and a few others. The palm called "palm-thatch" grows in great abundance. Its fanlike leaves make excellent thatch, hats, baskets, &c. It grows to a height of about three feet.

As regards the fauna, several species of birds are peculiar, including a Parrot (*Chrysotis caymanensis*). There are, curiously enough, no Humming-birds. The only mammals are introduced rats and mice. There are also some bats, but I saw only one, which I could not secure.

The Cayman Islands have not been worked nearly so thoroughly as the Lesser Antilles. The last collector there was, I believe, Mr. Taylor, of Jamaica, who obtained a set of birds' skins for Mr. Walter Rothschild. One new species (*Melopyrra taylori*) from that collection was described by Dr. Hartert (Nov. Zool. iii. p. 257) in 1896. When we arrived we were told that Dr. Sharpe had been there about three weeks before us in the S.Y. 'Emerald.'

We stayed three days at Grand Cayman, during which time I collected about one hundred birds. I made a two days' trip across the island in quest of the Parrot which breeds only on the north and north-east of it.

For permission to collect birds from the Cayman Islands during the "close-time," and for his kindness in procuring guides for me, I am much indebted to the Commissioner, His Honour Frederick Sheddon Sanguinetti.

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I obtained examples of the following twenty-six species of birds on Grand Cayman :---

GALEOSCOPTES CAROLINENSIS (Linn.).

Galeoscoptes carolinensis Cory, B. W. I. p. 32.

This bird is extremely abundant in Grand Cayman. It is usually seen in the evening, when it comes out of the thick undergrowth, where it spends most of the day, or sits in the taller bushes and trees, uttering a harsh croaking note.

One example, a male, has the under-tail-coverts blue-grey, faintly margined with reddish; this may be an immature bird.

MIMUS ORPHEUS (Linn.).

Mimus orpheus Cory, B. W. I. p. 33.

This Mocking-bird is very common, especially near the town, where it breeds in the gardens of the houses. There appears to be no difference between examples from Grand Cayman and Jamaica. Some specimens have no brown on the outer web of the third pair of rectrices, but this character is by no means constant.

DENDRIECA TIGRINA (Gmel.).

Dendroica tigrina Cory, B. W. I. p. 42.

A pair were shot close to Georgetown, and were the only examples of this species seen. It is a winter visitor from N. America.

DENDRŒCA CORONATA (Linn.).

Dendroica coronata Cory, B. W. I. p. 48.

I found this species very abundant on Grand Cayman. I believe that it is resident and breeds there. I shot five females and one example of uncertain sex. This bird seems equally at home in the woods, where it keeps to the trees, and in the open fields, where it creeps about through the grass like a Pipit.

DENDRECA AURICAPILLA Ridgw.

Dendræca auricapilla Ridgw. Proc. U.S. Nat. Mus. x. 1888, p. 572.

Dendroica aurocapilla Cory, B. W. I. p. 287.

Dendræca petechia auricapilla Ridgw. Birds N. & Mid. America, ii. p. 517.

This Golden Warbler, which is peculiar to Grand Cayman, is fairly common, especially among the mangroves.

DENDRECA VITELLINA CORY.

Dendroica vitellina Cory, Auk, iii. p. 497; id. B. W. I. p. 286; Ridgw. Birds N. & Mid. America, ii. p. 610.

I met with only an adult male of this Warbler, but I have since examined several specimens in Dr. Sharpe's and also in Dr. Lowe's collection made during the visit of S.Y. 'Emerald.' As Cory's description of this bird, which is only found at the Cayman Islands, is not so full as it might be, I append a short note on the plumage of my specimen :—

Upper parts dull green, paler on the rump; supereiliary stripes and under parts bright yellow, with a few olive streaks on the sides of the breast and a dark olive patch on the earcoverts; through the eye an olive streak, which is continued behind the eye; two outer rectrices heavily marked on the terminal portion of the inner webs with white, which is narrower on the third pair. Bill brown; tarsi and toes black. This species somewhat resembles *Dendræca discolor*, but is larger, less spotted below, and has no chestnut on the mantle.

CERTHIOLA SHARPII COry.

Certhiola sharpei Cory, Auk, iii. p. 197.

Careba sharpei Ridgw. Birds N. Amer. ii. p. 404.

The sides of the base of the bill, as well as the gape, in this species are only faintly rosy, not bright red as in all the other *Certhiolæ* from the West Indies.

This Honey-creeper is by no means uncommon on trees and bushes in Grand Cayman. I saw several young ones just out of the nest, but was unable to shoot them.

VIREO CAYMANENSIS COry.

Virco caymanensis Cory, Auk, iv. p. 6; id. B. W. I. p. 288; Nicoll, Bull. B. O. C. vol. xiv. p. 94 (June 15, 1904).

I met with only two examples of this species, which is peculiar to Grand Cayman. They were both shot in mangrove-trees on the N.E. side of the islands, where I was waiting for Parrots. Both my specimens have the crown and mantle much abraded. The song of this bird is very fine and rich, and at once betrays its presence. I was told by a native boy that its local name is "Sweet Bridget," which sound the two opening notes of its song certainly much resemble.

QUISCALUS CAYMANENSIS CORY.

Quiscalus caymanensis Cory, Auk, iii. p. 499; id. B. W. I. p. 291.

Iris white.

This Grackle is common in and peculiar to Grand Cayman. I met with it singly or in pairs on every part of the island that I visited. It is very tame. One specimen is very much smaller than the others, and is greener than the rest, which are of a glossy bluish black; the bill also is very much smaller. As this example is not brown enough for the first plumage, I take it to be a bird of the year after its first moult. Even this does not quite account for its small size, but I cannot believe that there can be two species on one small island.

SIURUS NOVEBORACENSIS (Gmel.).

Seiurus noveboracensis Cory, B. W. I. p. 56.

I shot a single example of this North-American species on Grand Cayman. It was feeding in a belt of mangrovetrees close to the shore, and was the only individual met with there.

EUETHIA OLIVACEA (Gmel.).

Euetheia olivacea Cory, B. W. I. p. 95.

This bird is found in Cuba, Jamaica, San Domingo, and Porto Rico. It does not appear to be numerous on Grand Cayman, although it cannot be called scarce. It seems to prefer gardens and open fields. I found this species very wild, wherein it differs considerably from most of the Cayman birds. I discovered a nest ready for eggs in the thick branches of a small tree; it was domed, and much resembled that of E. bicolor.

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PASSERCULUS SANDWICHENSIS (Gm.).

Ammodramus sandwichensis savanna Cory, B. W. I. p. 98.

I saw two examples of this species at Grand Cayman. They were in company, so I imagine that they were a pair. They were in a grass-field and were very shy. This bird is probably an occasional migrant to Grand Cayman from Florida. The specimen obtained resembled those from Florida in every particular.

MELOPYRRA TAYLORI Hartert.

Melopyrra taylori Hartert, Nov. Zool. iii. p. 257.

I obtained three examples only of this bird, in the thick wood by the roadside near Newlands. It is nearest to, but perfectly distinct from, *M. nigra* of Cuba.

EMPIDONAX MINIMUS (Baird).

Empidonax minimus Sclater, Cat. Birds B. M. xiv. p. 227; Nicoll, Bull. B. O. C. vol. xiv. p. 95.

I shot a single female example of this little Tyrant on Grand Cayman. It was among some bushes in an open field and was very shy. This is the first recorded occurrence of the species in the West Indies.

Empidonax acadicus has been recorded from Cuba (Cory, B. W. I. p. 121).

ELAINEA MARTINICA (Linn.).

Elainea martinica Cory, B. W. I. p. 117.

This bird is very abundant on Grand Cayman. It does not appear to differ in any respect from examples of E, martinica from the other islands.

PITANGUS CAYMANENSIS, Sp. nov.

Examples of the *Pitangus* of Grand Cayman, of which I obtained only one female, but of which there are five others in the British Museum, differ so considerably from *Pitangus caudifasciatus* that I have not the least hesitation in separating the species as distinct.

Cap dull brown, concealing a yellow vertical crest; earcoverts darker brown; nape brownish grey; mantle olivebrown. Upper tail-coverts edged with rufous; tail brown, middle pair of rectrices blackish, a broad basal band of white on the inner webs strongly washed with yellow, tips white, washed with pale rufous. Wing-coverts and secondaries edged with whitish; quills brown. Under parts white, washed with yellow on the flanks and abdomen; crissum, under tail-coverts, edge of wing, under wing-coverts, and axillaries sulphur-yellow.

A *freshly-moulted male* has the mantle olive, and the long secondaries broadly edged with yellowish white.

Total length 8.20 in., wing 4.30, culm. 1.30, tail 3.50, tarsus .90.

The female is similar but slightly smaller. An *immature* male has a small crest of dull gold; crown dull brown, indistinctly freekled with lighter brown; mantle greyish brown, slightly tinged with olive; wing-coverts and upper tail-coverts edged with rufous; the two central pairs of rectrices tipped with pale rufous; secondaries edged with dull white. Under parts white; under wing-coverts, thighs, and crissum pale sulphur-yellow.

A slightly older bird has some new olive feathers appearing on the mantle and the vertical crest slightly yellower.

Pitangus caymanensis may easily be distinguished from *P. caudifasciatus* by the following characters :—It is larger, and olive on the mantle; has a duller crown, and has the abdomen, crissum, under wing-coverts, and basal band of the tail yellower. I did not find this species at all numerous on Grand Cayman. The individuals that I saw were usually near the mangrove-swamps. It has quite the habits of a Tyrant-bird, sitting on an exposed branch and watching for insects.

MYIARCHUS DENIGRATUS COry.

Myiarchus denigratus Cory, Auk, iii. p. 500; id. B. W. I. p. 293.

I met with only four examples of this bird, which is peculiar to Grand Cayman; I unfortunately lost one of them. There was previously only one specimen in the British Museum. In its habits it seems to resemble the other species of *Myiarchus*. CROTOPHAGA ANI Linn.

Crotophaga ani Cory, B. W. I. p. 156.

The Black Ani is a common bird on Grand Cayman, and is usually seen in flocks of about a dozen individuals.

Coccyzus MAYNARDI Ridgw.

Coccygus maynardi Cory, B. W. I. p. 296.

Only one example of this species was met with. I shot it in a plantation of guavas.

COLAPTES GUNDLACHI COTY.

Colaptes gundlachi Cory, Auk, iii. p. 498; id. B. W. I. p. 175.

I did not meet with this bird on Grand Cayman, but Dr. P. Lowe, of the S.Y. 'Emerald,' gave me two skins. I have compared several specimens of this species, which were collected by Drs. Sharpe and Lowe, with examples of *Colaptes chrysocaulosus* from Cuba, and have come to the conclusion that the characters by which Mr. Cory separated the Cayman bird as a distinct species are constant.

MELANERPES CAYMANENSIS (COry).

Centurus caymanensis Cory, Auk, iii. p. 499; id. B. W. I. p. 295.

This Woodpecker is fairly numerous and exceedingly tame, so much so that on several occasions I almost touched one with my hand.

I have never met with birds so fearless of man as the majority of the Cayman species.

All my specimens are yellowish brown on the breast and abdomen, and barred above with brownish white and black, as are also the others that I have examined. They are not brownish white on the breast and belly and banded with dull white and black above, as stated by Cory. Two of them are adult.

CHRYSOTIS CAYMANENSIS CORY.

Chrysotis caymanensis Cory, Auk. iii. p. 497; id. B. W. I. p. 297.

During our visit to Grand Cayman this Parrot was breeding, at which time it is only to be found in the tall mangrove-trees in the north and north-east of the island. I was told that after the breeding-season it is to be seen everywhere.

I made a two-days' excursion across the island, and found several pairs in some tall mangroves. They are extremely noisy, and I could hear them screaming long before I got to the trees which they were frequenting. After waiting under cover for some time I got one of my specimens. I afterwards shot a pair sitting in a tree by the roadside. We also brought back a live bird of this species, purchased from a native, which was presented by Lord Crawford to the Zoological Society, and is now in their Gardens. All my specimens have the forchead white tinged with rosy pink, not dull yetlowish white as stated by Cory.

So far as I could ascertain, there seems to be no danger of this Parrot becoming extinct for many years.

CHAMÆPELIA PASSERINA (Linn.).

Columbigallina passerina Cory, B. W. I. p. 217.

Columbigallina passerina insularis Ridgway, Proc. U.S. Nat. Mus. p. 574 (1887); Cory, B. W. I. p. 297.

In the only example shot I could find no differences to warrant its separation as a distinct species. I have been carefully through the very large series in the British Museum, and find that individuals even from the same island differ as regards the colour of the bill.

This little Ground-Dove does not seem to be so common in Grand Cayman as it is in the other West-Indian Islands.

BUTORIDES VIRESCENS (Linn.).

Ardea virescens Cory, B. W. I. p. 247.

Both the adults obtained differ considerably from those which I shot in Dominica. The dorsal plumes are lavendergrey, and the abdomen is slaty grey instead of reddish, but the chief difference lies in the bill, which in the Cayman specimens is much longer and much more slender, and has only a streak of yellow on the lower mandible, whereas those from Dominica have the whole of the lower mandible yellow. The Cayman bird has also shorter wings. GALLINULA GALEATA (Licht.).

Gallinula galeata Cory, B. W. I. p. 257.

I saw a few of these Water-hens on a small pond near Newlands, in company with some Herons (*Butorides*).

STREPSILAS INTERPRES (Linn.).

Arenaria interpres Sharpe, Cat. xxiv. p. 92.

I met with a small flock of Turnstones on the shore near Savanna. The specimen obtained was just changing from winter to summer plumage.

On March 13th we left Grand Cayman for Little Cayman, which lies about seventy miles distant in a north-easterly direction. Our chief object in visiting this island was to look for the supposed peculiar Gannet (*Sula coryi*), of which we obtained about forty specimens. I also shot examples of several passerine birds. Amongst these were some of a new species of *Dendræca*, which I have had the pleasure of naming after Lord Crawford. We anchored at 4 P.M. in Anchorage Bay and at once went ashore. Some natives guided us to the "Gannetry"; they told us that Dr. Sharpe had been there about a fortnight before and had shot several Gannets. We spent about an hour in the "Gannetry," and the next morning we had about three hours ashore. I collected specimens of the following eight species of birds on Little Cayman :—

DENDRŒCA PALMARUM (Gmel.).

Dendroica palmarum Cory, B. W. I. p. 53.

Only one example of this species was met with on Little Cayman.

DENDRUCA CRAWFORDI. (Plate XI. fig. 1.)

Dendræca crawfordi Nicoll, Bull. B. O. C. vol. xiv. p. 95 (June 15, 1904).

I met with only three examples of this Warbler. They were creeping about in some thick undergrowth. It is a near ally of *Dendræca vitellina*, but a distinctly larger and paler species. It is also without the dark olive patch on the dar wag warring

I.DENDROECH CRAMFORDI.

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ear-coverts, and has not the streaks of the same colour on the sides of the breast which are characteristic of *D. vitellina*. Besides, the dark line through the eye is pale and is not continued beyond the eye, and the upper parts are more greenish yellow than in the bird of Grand Cayman. I have also examined a specimen of *Dendræca crawfordi* which was procured on Cayman Brac by Dr. Sharpe.

CERTHIOLA SHARPHI CORY.

Certhiola sharpei Cory, B. W. I. p. 288.

There appears to be no difference between examples of this species from Grand Cayman and Little Cayman. I obtained four examples on Little Cayman. The young birds are greyer on the back than the adults.

QUISCALUS GUNDLACHI Cassin.

Quiscalus gundlachii Cory, B. W. I. p. 113.

This Cuban species is common on Little Cayman, especially near the mangrove-swamp in which the Gannets breed. Iris pale yellow; bill, tarsi, and toes black.

ELAINEA MARTINICA (Linn.).

Elainea martinica Cory, B. W. I. p. 117.

I saw a few examples of this species on Little Cayman and obtained a female.

ZENAIDA SPADICEA Cory. Zenaida spadicea Cory, B. W. I. p. 215. Zenaida richardsoni Cory, Auk, iv. p. 7. Iris black; bill black; tarsi and toes red.

This Dove is usually seen among the mangroves; I shot my specimens close to the Gaunetry. The male is of a deeper rufous colour than the female. I have not been able to compare my skins with examples from Grand Cayman, as there are none from the latter island in the British Museum. Cory has provisionally separated the Little Cayman bird as Z. richardsoni (Auk, iv. p. 7, 1887) on the strength of a single specimen, which he says is lighter coloured and has the metallic feathers of the neck somewhat differently coloured, "paler and less in extent." It is possible, I think, that this paler bird may be only a female of Z. spadicea.

SULA PISCATOR.

Sula coryi Maynard, Contr. Sei. i. pp. 40, 51, 142 (1889). Sula piscator Grant, Cat. B. vol. xxvi. p. 432.

At Little Cayman we obtained eight males and three females of this Gannet in the white adult plumage, and fifteen males and eight females in the brown immature dress, besides three nestlings.

The coloration of the soft parts is as follows :---

White adult male.—Iris grey; bill pale lavender-blue, red at base; round the eyes green, eyelid sometimes bluish; gular sac velvety black; tarsi and toes pale red.

White adult female.—Iris grey; bill pale blue, base pink; gular sac grey; round the eyes pale blue; feet pale red. A character of the adult female is the grey centre of the gular sac.

Brown-plumaged male.—Iris grey; bill bluish grey, base orange-red; round the eyes greenish blue; gular sac black; feet pale red.

Brown-plumaged female.—Iris grey; bill pale blue, base pink; round the eyes pinkish; gular sac, sides black, centre pinkish grey.

I have compared my specimens with those of S. *piscator* in the British Museum, but I cannot see any constant peculiarity by which *Sula coryi* can be separated, even as a subspecies, from *Sula piscator*. Maynard's coloured figures in his 'Contributions to Science' are totally different, as regards the coloration of the soft parts, both from the Gannets of Little Cayman and from S. *piscator* of other parts of the world. The characters by which *Sula coryi* is said to differ from S. *piscator* are the *black* gular sac, and the white rump, tail, and vent, of the birds in brown plumage after the first moult.

These characters are, however, the same in specimens which I have examined from Mauritius and the S. Pacific. It is true that Cory's Gannet has nearly always a white rump and tail after its first moult, whereas some examples of S. piscator seem to change from the wholly brown plumage straight into the white adult plumage. I have examined two or three specimens of Sula piscator from the Pacific and Atlantic in the brown plumage with white rump, tail, and vent, and found them in all respects similar to the Cayman birds; several of my white specimens from Little Cayman had some brown in the tail. Moreover, I have seen several adult examples of S. piscator in the British Museum with black gular sacs. This being so, I cannot see any grounds for separating the Cayman Gannet as a distinct species.

I may here make a few remarks on the difference of the coloration of the soft parts in the sexes. I soon found that I could at once tell to which sex any example of this Gannet belonged by the coloration of the gular pouch; that is, in the adult stage and in birds in the brown plumage with white tails, in which latter plumage they also breed.

The males can always be distinguished from the females by their wholly black gular sac. In the female the centre of the sac is pinkish grey. In the white adult plumage the male only has green lores; in the female they are blue. The young in first plumage have the gular sac pinkish. As the bird gets older the sides of the sac become black, which gradually meets in the centre of the chin.

As to the habits of this Gannet, Dr. Sharpe has described them so fully (Bull. B. O. C. xiv. p. 65, 1904) that I have little more to add. At the time of our visit nearly all the eggs contained young, but we obtained two hard-set eggs, which I managed to blow.

FREGATA AQUILA (Linn.).

Fregata aquila Grant, Cat. xxvi. p. 443.

The Larger Frigate-bird was fairly numerous near the Gannetry on Little Cayman.

There seems to be some difference in the size of these birds from different localities. Those I shot at Little Cayman are very large and have very long stout bills, but some in the British Museum from the Atlantic are intermediate in size between this species and *Fregata minor*. We left Little Cayman on March 14th for Havana, where we anchored on March 17th. I had no opportunities for collecting in Cuba, but I noticed that the European Sparrow (*Passer domesticus*) was very abundant in the city of Havana.

On March 21st we left Havana for Florida.

On March 22nd, a few hours before we sighted the coast of Florida (Charlotte Harbour), two Warblers (*Dendræca palmarum*) flew on board and were secured. A few hours later we anchored in Charlotte Harbour, where we found the S.Y. 'Emerald' with Sir Frederick Johnston and the Countess of Wilton on board. Dr. Bowdler Sharpe had by that time left the 'Emerald' for England. We remained in Charlotte Harbour till April 4th, Tarpon-fishing, and were very successful. I did a little bird-collecting, and obtained examples of the following species :—

Mimus polyglottus (*Linn.*). Dendræca coronata (*Linn.*). Pipilo alleni *Coucs.* Passerculus sandwichensis (*Gmel.*). Caprimulgus carolinensis (*Gmel.*). Falco columbarius *Linn.* Chamæpelia passerina (*Linn.*). Melanerpes carolinus (*Linn.*). Larus argentatus (*Brünn.*). Hydranassa ruticollis (*Ginndl.*). Pelecanus fuscus *Linn.*

On April 4th we left Charlotte Harbour for Key West, where we stopped for a day to "coal," and then sailed for Bermuda, where we anchored on April 14th.

I could not collect birds at Bermuda, as firing of guns on the islands is forbidden. I found *Passer domesticus* very abundant there.

We left Bermuda on April 20th for St. Michaels, Azores. During the passage I skinned four Tarpons, which we had caught in Florida and frozen. The smallest weighed 34 lbs. and the largest 95 lbs.

On April 29th we anchored at Port Delgada, St. Michaels. I got a few examples of the following species there :---

Sylvia atricapilla (*Linn.*). Erithacus rubecula (*Linn.*). Motacilla melanope *Pall.* Fringilla moreleti *Pucher.* Carduelis elegans Steph. Serinus canarius (Linn.). Larus cachinnans Pall. Puffinus kuhli (Boie).

On Birds from Efulen in Camaroon.

My specimens of *Erithacus rubecula* from the Azores are slightly smaller and paler than British examples. But the bird appeared to be quite identical in habits with our Redbreast.

We reached Cowes on May 8th, after an absence of nearly five mouths. During the voyage I had made with my own hands about 500 bird-skins referable to about 120 species, of which three are believed to be new to science. (See Bull. B. O. C. xiv. p. 95, June 15th, 1904.)

In concluding my notes on the birds collected during the cruise, I wish to offer my very best thanks to the Earl of Crawford for his kindness in again taking me with him as Naturalist; also to Mr. C. R. Pawson and Dr. R.C. Maewatters, who accompanied Lord Crawford during the voyage, for the help which they frequently gave me in shooting specimens. I have worked out my collection of birds at the British Museum; and I tender my very best thanks to Dr. Bowdler Sharpe, Mr. W. Ogilvie-Grant, and their excellent assistants Messrs. Chubb, Wells, and Render, for the help which they have given me while doing so.

Lord Crawford has presented this West-Indian collection, as he did that obtained during our former voyage round the World, to the British Museum.

XLIII.—On further Collections of Birds from the Efulen District of Camaroon, West Africa. By R. Bowdler Sharpe, LL.D. &c.—Part II.*

(Plate XII.)

IN this paper I continue the list of the birds forwarded by Mr. G. L. Bates during the last eighteen months. His collections are of very great importance to science, and I have included in the present memoir some valuable notes

* Continued from p. 106. See also 'Ibis,' 1902, p. 89, for a previous paper on this subject.